



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,924	03/12/2001	Fu-Sheng Chen	06484.0070	1250
22852	7590	11/23/2004	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 1300 I STREET, NW WASHINGTON, DC 20005			NGUYEN, DANNY	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/802,924

Applicant(s)

CHEN, FU-SHENG

Examiner

Danny Nguyen

Art Unit

2836

*Am*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments filed 09/23/2004 have been fully considered but they are not persuasive.

Regarding claims 1 and 17, applicant argued that Sumnitsch fails to teach the lift base has a threaded hole for receiving the first end of the lift pin wherein the first pin has a second end for supporting the wafer. Examiner respectfully disagrees with the applicant's argument Sumnitsch discloses a chuck system for lifting wafer (fig. 1 and 2) comprises the lift base (14) has a threaded hole for receiving the first end of the lift pin (the lift pins includes pegs 1 and push bar 15 shown in figure 2) wherein the first pin has a second end for supporting the wafer (col. 3, lines 19-27).

In response to applicant's arguments with respect to claims 7 and 8 against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-6, 9, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tepman (USPN 5,951,775) in view of Sumnitsch (USPN 6,056,825).

Regarding to claims 1, 5, 17, 18, Tepman discloses a chuck system for supporting a semiconductor wafer (see fig. 1 and 2) comprises a chuck platform (16) for supporting the semiconductor wafer, lift structure (see fig. 2) movably coupled to the platform to receive the wafer (14), including a lift base (shown in fig. 2) and at least one lift pin (30) removably coupled to the base, the lift pin having two ends with a first end removably coupled to the base and the second end coupled for supporting the wafer during operation of the lift structure, wherein the first lift pin is threaded. Tepman does not disclose the lift base has a thread hole. Sumnitsch discloses a semiconductor processing apparatus having a lift base (14) with a thread hole (32) for lift pins (fig. 2, col. 3, lines 19-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the threaded hole as disclosed by Sumnitsch into the lift base of Tepman in order to engage the lift pins without screws.

Regarding claim 3, Tepman discloses the system comprises a bolt (shown in fig. 2), wherein the first end of the lift pin (first pin 30) is threaded and the bolt removably couples the lift pin with the base through an opening provided by the lift base.

Regarding claims 4, 9, Tepman discloses the lift structure comprises a plurality of pins (30) coupled to the lift base and the lift base is flat and provides one opening for receiving the pins (30) (see fig. 2).

Regarding to claim 6, Tepman discloses the chuck system is an electrostatic chuck system (fig. 2).

Regarding to claim 19, Tepman discloses that the chuck system comprises a driving mechanism (driving mechanism 18) for driving the lift structure, the lift base having at least one mounting hole to mount the lift structure to the driving mechanism, wherein the mounting hole is positioned closer to the center of the lift base than the lift pin (shown in fig. 2).

3. Claims 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tepman in view of Sumnitsch, and Morita et al. (USPN 5,815,366). Tepman and Sumnitsch disclose all limitations of claim 1 as discussed above, but do not disclose the lift pin connected to ground when the lift receives the wafer. Morita discloses a lift pin connected to ground (ground circuit 30 shown in fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the circuit of Tepman and Sumnitsch to use a ground circuit connected to the lift pin as taught by Morita in order to discharge electrostatic charges on the wafer during lifting operation, which would allow the wafer to be lifted easier since it will no longer be attracted to the chuck.

#### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (571)-272-2054. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN  
DN  
11/15/2004

A handwritten signature in cursive script that reads "Stephen W. Jackson". Below the signature, the date "11-17-04" is handwritten.

STEPHEN W. JACKSON  
PRIMARY EXAMINER